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INDEFINITE QUANTITY/INDEFINITE DELIVERY CONTRACT FOR REPAIR, RENOVATION, ALTERATION TO FACILITIES FOR ARCHITECT OF THE CAPITOL JOB ORDER CONTRACT

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(c) *Evaluation of offers.* (1) The Government will evaluate an offer requesting exception to the requirements of the Buy American Act based on claimed unreasonable cost of domestic construction material, by adding to the offered price the appropriate percentage of the cost of such foreign construction material, as specified in paragraph (b)(3)(i) of the clause at FAR 52.225-9.

(2) If the evaluation results in a tie between an offeror that requested the substitution of foreign construction material based on unreasonable cost and an offeror that did not request an exception, the Contracting Officer will award to the offeror that did not request an exception based on unreasonable costs.

(d) *Alternate offers.* (1) When an offer includes foreign construction material not listed by the Government in this solicitation in paragraph (b)(2) of the clause at FAR 52.225-9, the offeror may also submit an alternate offer based on use of equivalent domestic construction material.

(2) If an alternate offer is submitted, the offeror shall submit a separate Standard Form 1442 for the alternate offer and a separate price comparison table prepared in accordance with paragraphs (c) and (d) of the clause at 52.225-9 for the offer that is based on the use of any foreign construction material for which the Government has not yet determined an exception applies.

(3) If the Government determines that a particular exception requested in accordance with paragraph (c) of the clause at 52.225-9 does not apply, the Government will evaluate only those offers based on use of the equivalent domestic construction material, and the offeror shall be required to furnish such domestic construction material. An offer based on use of the foreign construction material for which an exception was requested--

(i) Will be rejected as nonresponsive if this acquisition is conducted by sealed bidding; or

(ii) May be accepted if revised during negotiations.

(End of provision)

AOC52.228-1 OFFER GUARANTEE (JUN 2004)

(a) Failure to furnish an Offer Guarantee in the required form and amount, with and as a part of the proposal, will be cause for rejection of the proposal.

(b) The offeror shall furnish an Offer Guarantee of not less than 20% of the maximum annual amount of \$5,000,000.00 in the form of a firm commitment consisting of a Bid Bond, Certified Check, Cashier's Check, Irrevocable Letter of Credit, or Postal Money Order made payable to the Architect of the Capitol, or, under Treasury Department Regulations, certain bonds or notes of the United States. The Contracting Officer will return Offer Guarantees, other than Bid Bonds, (1) to unsuccessful offerors as soon as practicable after evaluation of the proposals; and (2) to the successful offeror upon execution of contractual documents and bonds (including any necessary coinsurance or reinsurance agreements), as required by the offer as accepted.

(End of provision)

END OF SOLICITATION CONDITIONS

(1.) The Contractor shall develop a joint scope based on discussions and findings from pre-proposal meeting with the Government. Joint scope shall be submitted to the Government for approval prior to Contractor solicitation of competitive bids.

Government approval of joint scope does not alleviate Contractor from meeting requirements in original Government scope unless specifically agreed upon between the two parties.

(2.) The Contractor shall solicit a minimum of three independent, qualified, and complete bids from potential subcontractors. The determination of qualified subcontractors shall be the responsibility of the Contractor. In the event that the Contractor cannot provide the minimum three independent bids, the Contractor shall request and the Government may approve the use of less than three bids. Additional supporting information shall be required if the Contractor believes that only a single source can satisfactorily perform the work and sole source subcontracting is required.

(3.) If after receipt of the RFP, the Contractor believes that qualified subcontractors are not available or that use of subcontractors would adversely affect the performance of the specified work, the Contractor shall submit information supporting this assertion and request approval for the Contractor's company to bid the work directly.

5 CONTRACTOR'S PROPOSAL

5.1 **General:** Unless otherwise specified, the Contractor shall submit a proposal to the Contracting Officer within 14 calendar days after receipt of the SOW, or (2) determined by the Contracting Officer for urgent projects within 7 calendar days after receipt of the SOW by the Contractor. The Contractor shall make every effort to meet deadline for proposal submittal.

5.2 For projects that require design effort by the Contractor, the Contractor shall submit their proposal within 15 calendar days, or the time mutually agreed upon between the Government and the Contractor.

5.3 **Technical Basis Documentation:** In support of the technical basis for individual orders, the Contractor will generally provide;

- (1) Joint scoring documentation,
- (2) Sketches, shop drawings, and specifications, as required,
- (3) Engineering calculations, as required,
- (4) Material submittals, as required,
- (5) Schedule for any long lead items,
- (6) Schedule for the task order.

SECTION 31 00 00 - EARTHWORK**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

- A. **Drawings** and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. **This Section** includes the following:
1. Preparing subgrades for walks and pavements.
 2. Excavating and backfilling.
- B. **Related Sections** include the following:
1. Division 32 Section - EXPOSED AGGREGATE CONCRETE.
 2. Division 32 Section - CEMENT CONCRETE PAVEMENT.

1.3 DEFINITIONS

- A. **Backfill:** Soil material or controlled low-strength material used to fill an excavation.
1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
 2. Final Backfill: Backfill placed over initial backfill to fill a trench.
- B. **Bedding Course:** Course placed over the excavated subgrade in a trench before laying pipe.
- C. **Borrow Soil:** Satisfactory soil imported from off-site for use as fill or backfill.
- D. **Drainage Course:** Course supporting the slab-on-grade that also minimizes upward capillary flow of pore water.
- E. **Excavation:** Removal of material encountered above subgrade elevations and to lines and dimensions indicated.
1. Authorized Additional Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions as directed by Architect. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.
 2. Bulk Excavation: Excavation more than 10 feet in width and more than 30 feet in length.
 3. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions without direction by Architect. Unauthorized excavation, as well as remedial work directed by Architect, shall be without additional compensation.
- F. **Fill:** Soil materials used to raise existing grades.
- G. **Rock:** Rock material in beds, ledges, unstratified masses, conglomerate deposits, and boulders of rock material 3/4 cu. yd. or more in volume that exceed a standard penetration resistance of 100 blows/2 inches when tested by an independent geotechnical testing agency, according to ASTM D 1586.

- H. **Structures:** Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.
- I. **Subbase Course:** Course placed between the subgrade and base course for hot-mix asphalt pavement, or course placed between the subgrade and a cement concrete pavement or a cement concrete or hot-mix asphalt walk.
- J. **Subgrade:** Surface or elevation remaining after completing excavation, or top surface of a fill or backfill immediately below subbase, drainage fill, or topsoil materials.
- K. **Utilities:** On-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

1.4 SUBMITTALS

- A. **Product Data:** For the following:
 - 1. Each type of plastic warning tape.
 - 2. Geotextile.

1.5 QUALITY ASSURANCE

- A. **Pre-excavation Conference:** Conduct conference at Project site to comply with requirements in Division 1 Section GENERAL REQUIREMENTS.

1.6 PROJECT CONDITIONS

- A. **Existing Utilities:** Do not interrupt utilities serving facilities occupied by Owner or others unless permitted in writing by Architect and then only after arranging to provide temporary utility services according to requirements indicated.
 - 1. Notify Architect not less than two days in advance of proposed utility interruptions.
 - 2. Do not proceed with utility interruptions without Architect's written permission.
 - 3. Contact utility-locator service for area where Project is located before excavating.
- B. **Demolish** and completely remove from site existing underground utilities indicated to be removed. Coordinate with utility companies to shut off services if lines are active.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

- A. **General:** Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.
- B. **Satisfactory Soils:** ASTM D 2487 Soil Classification Groups GW, GP, GM, SW, SP, and SM, or a combination of these groups; free of rock or gravel larger than 2 inches in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter.
- C. **Unsatisfactory Soils:** Soil Classification Groups GC, SC, CL, ML, OL, CH, MH, OH, and PT according to ASTM D 2487, or a combination of these groups.
 - 1. Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.

- D. **Engineered Fill:** Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 90 percent passing a 1-1/2-inch (37.5-mm) sieve and not more than 12 percent passing a No. 200 (0.075-mm) sieve.
- E. **Bedding Course:** Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; except with 100 percent passing a 1-inch (25-mm) sieve and not more than 8 percent passing a No. 200 (0.075-mm) sieve.
- F. **Drainage Course:** Narrowly graded mixture of washed crushed stone, or crushed or uncrushed gravel; ASTM D 448; coarse-aggregate grading Size 57; with 100 percent passing a 1-1/2-inch (37.5-mm) sieve and 0 to 5 percent passing a No. 8 (2.36-mm) sieve.
- G. **Filter Material:** Narrowly graded mixture of natural or crushed gravel, or crushed stone and natural sand; ASTM D 448; coarse-aggregate grading Size 67; with 100 percent passing a 1-inch (25-mm) sieve and 0 to 5 percent passing a No. 4 (4.75-mm) sieve.
- H. **Sand:** ASTM C 33; fine aggregate, natural, or manufactured sand.
- I. **Impervious Fill:** Clayey gravel and sand mixture capable of compacting to a dense state.

2.2 GEOTEXTILES

- A. **Separation Geotextile:** Woven geotextile fabric, manufactured for separation applications, made from polyolefins or polyesters; with elongation less than 50 percent; complying with AASHTO M 288 and the following, measured per test methods referenced:
 - 1. Survivability: Class 2; AASHTO M 288.
 - 2. Grab Tensile Strength: 247 lbf (1100 N); ASTM D 4632.
 - 3. Sewn Seam Strength: 222 lbf (990 N); ASTM D 4632.
 - 4. Tear Strength: 90 lbf (400 N); ASTM D 4533.
 - 5. Puncture Strength: 90 lbf (400 N); ASTM D 4833.
 - 6. Apparent Opening Size: No. 60 (0.250-mm) sieve, maximum; ASTM D 4751.
 - 7. Permittivity: 0.02 per second, minimum; ASTM D 4491.
 - 8. UV Stability: 50 percent after 500 hours' exposure; ASTM D 4355.

2.3 ACCESSORIES

- A. **Warning Tape:** Acid- and alkali-resistant polyethylene film warning tape manufactured for marking and identifying underground utilities, 6 inches (150 mm) wide and 4 mils (0.1 mm) thick, continuously inscribed with a description of the utility; colored as follows:
- B. **Detectable Warning Tape:** Acid- and alkali-resistant polyethylene film warning tape manufactured for marking and identifying underground utilities, a minimum of 6 inches (150 mm) wide and 4 mils (0.1 mm) thick, continuously inscribed with a description of the utility, with metallic core encased in a protective jacket for corrosion protection, detectable by metal detector when tape is buried up to 30 inches (750 mm) deep; colored as follows:
 - 1. Red: Electric.
 - 2. Yellow: Gas, oil, steam, and dangerous materials.
 - 3. Orange: Telephone and other communications.
 - 4. Blue: Water systems.
 - 5. Green: Sewer systems.

PART 3 - EXECUTION**3.1 PREPARATION**

- A. **Protect structures**, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.
- B. **Preparation of subgrade** for earthwork operations including removal of vegetation, topsoil, debris, obstructions, and deleterious materials from ground surface.
- C. **Protect and maintain** erosion and sedimentation controls, during earthwork operations.
- D. **Provide protective** insulating materials to protect subgrades and foundation soils against freezing temperatures or frost.

3.2 EXPLOSIVES

- A. **Explosives:** Do not use explosives.

3.3 EXCAVATION, GENERAL

- A. **Unclassified Excavation:** Excavate to subgrade elevations regardless of the character of surface and subsurface conditions encountered. Unclassified excavated materials may include rock, soil materials, and obstructions. No changes in the Contract Sum or the Contract Time will be authorized for rock excavation or removal of obstructions.
 - 1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.
 - 2. Remove rock to lines and grades indicated to permit installation of permanent construction.
- B. **Classified Excavation:** Excavate to subgrade elevations. Material to be excavated will be classified as earth and rock. Do not excavate rock until it has been classified and cross sectioned by Architect. The Contract Sum will be adjusted for rock excavation according to unit prices included in the Contract Documents. Changes in the Contract time may be authorized for rock excavation.
 - 1. Earth excavation includes excavating pavements and obstructions visible on surface; underground structures, utilities, and other items indicated to be removed; together with soil, boulders, and other materials not classified as rock or unauthorized excavation.
 - a. Intermittent drilling; ram hammering; or ripping of material not classified as rock excavation is earth excavation.
 - 2. Rock excavation includes removal and disposal of rock. Remove rock to lines and subgrade elevations indicated to permit installation of permanent construction.

3.4 EXCAVATION FOR WALKS AND PAVEMENTS

- A. **Excavate surfaces** under walks and pavements to lines, cross sections, elevations, and subgrades approved by the Architect.

3.5 SUBGRADE INSPECTION

- A. **Notify Architect** when excavations have reached required subgrade.

- B. **If Architect** determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed.
- C. **Proof-roll subgrade** below pavements with heavy pneumatic-tired equipment to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.
 - 1. Completely proof-roll subgrade in one direction, repeating proof-rolling in direction perpendicular to first direction. Limit vehicle speed to 3 mph (5 km/h).
 - 2. Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, as determined by Architect, and replace with compacted backfill or fill as directed.
- D. **Authorized additional excavation** and replacement material will be paid for according to Contract provisions for changes in the Work.
- E. **Reconstruct subgrades** damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Architect, without additional compensation.

3.6 STORAGE OF SOIL MATERIALS

- A. **Stockpile borrow soil** materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
 - 1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.

3.7 BACKFILL

- A. **Place and compact backfill** in excavations promptly, but not before completing the following:
 - 1. Construction below finish grade including, where applicable, subdrainage, damp-proofing, waterproofing, and perimeter insulation.
 - 2. Surveying locations of underground utilities for Record Documents.
 - 3. Testing and inspecting underground utilities.
 - 4. Removing concrete formwork.
 - 5. Removing trash and debris.
 - 6. Removing temporary shoring and bracing, and sheeting.
 - 7. Installing permanent or temporary horizontal bracing on horizontally supported walls.
- B. **Place backfill** on subgrades free of mud, frost, snow, or ice.

3.8 UTILITY TRENCH BACKFILL

- A. **Place backfill** on subgrades free of mud, frost, snow, or ice.
- B. **Place and compact** bedding course on trench bottoms and where indicated. Shape bedding course to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits.
- C. **Place and compact** initial backfill of satisfactory soil, free of particles larger than 1 inch (25 mm) in any dimension, to a height of 12 inches (300 mm) over the utility pipe or conduit.
- D. **Backfill voids** with satisfactory soil while installing and removing shoring and bracing.
- E. **Place and compact** final backfill of satisfactory soil to final subgrade elevation.

- F. **Install warning tape** directly above utilities, 12 inches (300 mm) below finished grade, except 6 inches (150 mm) below subgrade under pavements and slabs.

3.9 SOIL MOISTURE CONTROL

- A. **Uniformly moisten** or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.
 - 1. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.
 - 2. Remove and replace, or scarify and air dry otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

3.10 COMPACTION OF SOIL BACKFILLS AND FILLS

- A. **Place backfill** and fill soil materials in layers not more than 8 inches in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches (100 mm) in loose depth for material compacted by hand-operated tampers.
- B. **Place backfill** and fill soil materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.
- C. **Compact soil** materials to not less than the following percentages of maximum dry unit weight according to ASTM D 698.
 - 1. Under walks, steps and pavements, scarify and recompact top 12 inches of existing subgrade and each layer of backfill or fill soil material at 95 percent.
 - 2. Under lawn or unpaved areas, scarify and recompact top 6 inches below subgrade and compact each layer of backfill or fill soil material at 80 percent.
 - 3. For utility trenches, compact each layer of initial and final backfill soil material at 85 percent.

3.11 GRADING AND PREPARATION

- A. **General:** Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction 95% requirements and replace to existing cross sections, lines, and elevations.
 - 1. Provide a smooth transition between adjacent existing grades and new grades.
 - 2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.
- B. **Site Grading:** Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:
 - 1. Lawn or Unpaved Areas: Plus or minus 1 inch.
 - 2. Walks: Plus or minus 1 inch.
 - 3. Pavements: Plus or minus ½ inch.
- C. **Install separation geotextile** on prepared subgrade according to manufacturer's written instructions, overlapping sides and ends.

3.12 FIELD QUALITY CONTROL

- A. **Testing Agency:** Contractor will engage a qualified independent geotechnical engineering testing agency to perform field quality-control testing.

- B. **Allow testing agency** to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earthwork only after test results for previously completed work comply with requirements.
- C. **Testing agency will** test compaction of soils in place according to ASTM D 1556, ASTM D 2167, ASTM D 2922, and ASTM D 2937, as applicable. Tests will be performed at the following locations and frequencies:
 - 1. Paved Areas: At subgrade and at each compacted fill and backfill layer, at least 1 test for every 2000 sq. ft. or less of paved area or building slab, but in no case fewer than 3 tests.
 - 2. Trench Backfill: At each compacted initial and final backfill layer, at least 1 test for each 150 feet or less of trench length, but no fewer than 2 tests.
- D. **When testing agency** reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil to depth required; recompact and retest until specified compaction is obtained.

3.13 PROTECTION

- A. **Protecting Graded Areas:** Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.
- B. **Repair and reestablish grades** to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
 - 1. Scarify or remove and replace soil material to depth as directed by Architect; reshape and recompact.
- C. **Where settling occurs** before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.
 - 1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

3.14 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. **Disposal:** Remove surplus satisfactory soil and waste material, including unsatisfactory soil, trash, and debris, and legally dispose of it off Government property.
- B. **Disposal:** Transport surplus satisfactory soil to designated storage areas on Government property. Stockpile or spread soil as directed by Architect.
 - 1. Remove waste material, including unsatisfactory soil, trash, and debris, and legally dispose of it off Government property.

END OF SECTION 310000

SECTION 32 13 13.13 - EXPOSED AGGREGATE CONCRETE**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

- A. **Drawings** and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 DESCRIPTION OF WORK:

- A. **Where indicated** by Summary of Work, Division 1 Section GENERAL REQUIREMENTS, and as indicated on the Contract Drawings. Remove existing concrete paving and replace with new materials as specified in this Section.
1. Provide expansion joint assemblies, every sixty feet, within new sidewalks and where new sidewalks meet existing sidewalks.
 2. Provide Load Transfer Assemblies, at every expansion joint, within new sidewalks and where new sidewalks meet existing sidewalks.
 3. Provide isolation joints where new sidewalks abut curbs, catch basins, manholes, inlets, structures, walks, other fixed objects, and where indicated.
 4. Reset and realign existing curbs and gutters abutting new sidewalks to be poured. Replace if needed when in agreement with Architect.
- B. **Related Sections** include the following:
1. Division 2 Section EARTHWORK for subgrade preparation, grading, and subbase course.
 2. Division 2 Section CEMENT CONCRETE PAVEMENT for concrete pavement.
 3. Division 2 Section PAVEMENT JOINT SEALANTS for expansion and isolation joints in concrete pavement and with adjacent construction.

1.3 DEFINITIONS

- A. **Cementitious Materials:** Portland cement alone.

1.4 SUBMITTALS

- A. **Product Data:** For each type of manufactured material and product indicated.
- B. **Design Mixtures:** For each concrete pavement mixture. Include alternate mixture designs when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.
- C. **Aggregate:** 5-10 lb. bag of aggregate to be used in seeding process. An aggregate sample should also be produced with each aggregate delivery.
- D. **Load Transfer Assembly:** Typical assembly and method of installation
- E. **Qualification Data:** For manufacturer and testing agency.
- F. **Material Certificates:** Signed by manufacturers certifying that each of the following materials complies with requirements:
1. Cementitious materials.
 2. Steel reinforcement and reinforcement accessories.
 3. Fiber reinforcement.
 4. Admixtures.
 5. Curing compounds.

6. Applied finish materials.
7. Bonding agent or adhesive.
8. Joint fillers.

- G. **Field quality-control** test reports.
- H. **Minutes** of pre-installation conference.

1.5 QUALITY ASSURANCE

- A. **Installer Qualifications:** A Contractor who qualifies as a "Specialist" under the provisions of Division 1 Section GENERAL REQUIREMENTS.
- B. **Manufacturer Qualifications:** Manufacturer of ready-mixed concrete products who complies with ASTM C 94/C 94M requirements for production facilities and equipment.
1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities."
- C. **Codes and Standards:**
1. ACI 301 "Specifications for Structural Concrete"; comply with applicable provisions as otherwise indicated.
 2. District of Columbia Department of Highways and Traffic, "Standard Specifications for Highways and Structures" (DHSS). Paragraphs of DHSS referring to basis of payment shall not apply to this Work.
- D. **Mockups:** Cast mockups of full-size sections of concrete pavement to demonstrate typical joints, surface finish, texture, color, and standard of workmanship.
1. Build 2 mockups in a location, directed by Architect, and of the size 4'-0" x 4'-0" or, if not indicated, as directed by Architect.
 2. Notify Architect seven days in advance of dates and times when mockups will be constructed.
 3. Obtain Architect's approval of mockups before starting construction.
 4. Demolish and remove approved mockups from the site when directed by Architect.
 5. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.
- E. **Pre-installation Conference:** Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."
1. Before submitting design mixtures, review concrete pavement mixture design and examine procedures for ensuring quality of concrete materials and concrete pavement construction practices. Require representatives, including the following, of each entity directly concerned with concrete pavement, to attend conference:
 - a. Contractor's superintendent.
 - b. Independent testing agency responsible for concrete design mixtures.
 - c. Ready-mix concrete producer.
 - d. Concrete pavement subcontractor.
- F. **Source Limitations:** Obtain each type or class of cementitious materials of the same brand from the same manufacturer's plant and each aggregate from one source.

1.6 PRODUCT HANDLING

- A. **Deliver, store and handle** concrete products, including bulk materials, in a manner to afford least interference with parking and traffic areas. Store material on site where directed by the Architect.

1.7 PROJECT CONDITIONS

- A. **Traffic Control:** Maintain access for vehicular and pedestrian traffic as required for other construction activities.
- B. **Curb Realignment:** All curbs abutting sidewalks to be replaced shall be realigned to proper grade. If any curbs are broken or chipped so as to create a hazard, the curbs shall be replaced with like curbing. All hazardous curbs shall be agreed upon with the Architect.

PART 2 - PRODUCTS

2.1 FORMS

- A. **Form Materials:** Plywood, metal, metal-framed plywood, or other approved panel-type materials to provide full-depth, continuous, straight, smooth exposed surfaces.
 - 1. Use flexible or curved forms for curves with a radius 100 feet (30.5 m) or less.
 - 2. All forms/materials shall be new or in "like new" condition.
- B. **Form-Release Agent:** Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.

2.2 STEEL REINFORCEMENT

- A. **Plain-Steel Welded Wire Reinforcement:** Plain steel, ASTM A 185, flat sheet, 6" x 6", No. 8 by No. 8, unless otherwise indicated, placed 1-1/2" below top of slab.
- B. **Deformed-Steel Welded Wire Reinforcement:** ASTM A 497, flat sheet.
- C. **Reinforcing Bars:** ASTM A 615/A 615M, Grade 60 (Grade 420); deformed.
- D. **Steel Bar Mats:** ASTM A 184/A 184M; with ASTM A 615/A 615M, Grade 60 (Grade 420), deformed bars; assembled with clips.
- E. **Plain Steel Wire:** ASTM A 82, as drawn.
- F. **Deformed-Steel Wire:** ASTM A 496.
- G. **Joint Dowel Bars:** Plain steel bars, ASTM A 615/A 615M, Grade 60 (Grade 420). Cut bars true to length with ends square and free of burrs.
- H. **Tie Bars:** ASTM A 615/A 615M, Grade 60 (Grade 420), deformed.
- I. **Hook Bolts:** ASTM A 307, Grade A (ASTM F 568M, Property Class 4.6), internally and externally threaded. Design hook-bolt joint assembly to hold coupling against pavement form and in position during concreting operations, and to permit removal without damage to concrete or hook bolt.
- J. **Bar Supports:** Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars, welded wire reinforcement, and dowels in place. Manufacture bar supports according to CRSI's "Manual of Standard Practice" from steel wire, plastic, or precast concrete of greater compressive strength than concrete, and as follows:
 - 1. Equip wire bar supports with sand plates or horizontal runners where base material will not support chair legs.

2.3 CONCRETE MATERIALS

- A. **Cementitious Material:** Use the following cementitious materials, of the same type, brand, and source throughout the Project:
 - 1. Portland Cement: ASTM C 150, Type 1.
- B. **Normal-Weight Aggregates:** ASTM C 33, Class 4S coarse aggregate, uniformly graded. Provide aggregates from a single source.
 - 1. Aggregate for “seeding”: Washed, buff-colored river gravel, screened to no smaller than 1/8" in diameter and no larger than 1/2" in diameter for “seeding” aggregate; free from deleterious materials such as iron oxides and iron pyrites, conforming to related subparagraphs of DHSS, Article 803 “Aggregates”, and selected for uniformity.
 - 2. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement. Color shall be brown to yellow.
- C. **Water:** Clean/potable, per ASTM C 94/C 94M.
- D. **Air-Entraining Admixture:** ASTM C 260, 6% entrained air.
- E. **Chemical Admixtures:** Provide admixtures certified by manufacturer to be compatible with other admixtures and to contain not more than 0.1 percent water-soluble chloride ions by mass of cementitious material.
 - 1. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.
 - 2. Retarding Admixture: ASTM C 494/C 494M, Type B.
 - 3. Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.
 - 4. High-Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type F.
 - 5. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type G.
 - 6. Plasticizing and Retarding Admixture: ASTM C 1017/C 1017M, Type II.

2.4 CURING MATERIALS

- A. **Absorptive Cover:** AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. (305 g/sq. m) dry.
- B. **Moisture-Retaining Cover:** ASTM C 171 or ASTM D 2103, polyethylene film, minimum 2 mils thick.
- C. **Water:** Potable.
- D. **Evaporation Retarder:** Waterborne, monomolecular film forming; manufactured for application to fresh concrete.
 - 1. Products:
 - a. ChemMasters; Spray-Film.
 - b. Conspec Marketing & Manufacturing Co., Inc.; Aquafilm.
 - c. Dayton Superior Corporation; Sure Film.
 - d. Euclid Chemical Company (The); Eucobar.
 - e. Lambert Corporation; Lambco Skin.
 - f. L&M Construction Chemicals, Inc.; E-Con.
 - g. Sika Corporation, Inc.; SikaFilm.
 - h. Or Approved Equal.
- E. **Clear Waterborne Membrane-Forming Curing Compound:** ASTM C 309, Type 1, Class B.
- F. **White Waterborne Membrane-Forming Curing Compound:** ASTM C 309, Type 2, Class B.

2.5 RELATED MATERIALS

- A. **Expansion- and Isolation-Joint-Filler Strips:** Pre-formed cork or self-expanding cork strips complying with ASTM D 1752 for Type II, 1/2" thick x 6" wide, trimmed to fit finish height.
- B. **Bonding Agent:** ASTM C 1059, Type II, non-redispersible, acrylic emulsion or styrene butadiene.

2.6 CONCRETE MIXTURES

- A. **Prepare design mixtures**, proportioned according to ACI 301, for each type and strength of normal-weight concrete determined by either laboratory trial mixes or field experience. No carbon black, calcium chloride or any other additive shall be used in mix other than admixtures specified above.
 - 1. Use a qualified independent testing agency for preparing and reporting proposed concrete mixture designs for the trial batch method.
- B. **Proportion mixtures** to provide normal-weight concrete with the following properties:
 - 1. Single Course: Sidewalks shall be constructed in one 6" thick course of concrete with:
 - a. Compressive Strength (28 Days): 4,500 psi (31 MPa).
 - b. Maximum Water-Cementitious Materials Ratio at Point of Placement: 0.45.
 - c. Slump Limit: 4 inches (125 mm), plus or minus 1 inch (25 mm).
 - 2. Aggregate shall be seeded onto the surface of freshly poured Portland cement, distributed evenly and in a quantity sufficient to assure that the surface finish will consist of exposed aggregate gravel primarily, with a bare minimum of exposed matrix.
- C. **Add air-entraining admixture** at manufacturer's prescribed rate to result in normal-weight concrete at point of placement having an air content as follows:
 - 1. Air Content: 6 percent plus or minus 1.5 percent for 3/4-inch (19-mm) nominal maximum aggregate size
- D. **Limit water-soluble**, chloride-ion content in hardened concrete to 0.15 percent by weight of cement.
- E. **Chemical Admixtures:** Use admixtures according to manufacturer's written instructions.
 - 1. Use water-reducing admixture in concrete, as required, for placement and workability.
 - 2. Use water-reducing and retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.

2.7 CONCRETE MIXING

- A. **Ready-Mixed Concrete:** Measure, batch, and mix concrete materials and concrete according to ASTM C 94/C 94M. Furnish batch certificates for each batch discharged and used in the Work.
 - 1. When air temperature is between 85 deg F (30 deg C) and 90 deg F (32 deg C), reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F (32 deg C), reduce mixing and delivery time to 60 minutes.
- B. **Project-Site Mixing:** Only permitted with written permission from Architect.

2.9 CONCRETE SEALER

- A. **Clear, water-based**, epoxy-modified, solvent-free, breathable pavement sealer complying with the following:
 - 1. Permeability: ASTM E514, zero water penetration rate.
 - 2. Water Vapor Transmission: ASTM D1653, min. 60 grams/meter²/day at average dry film thickness of 3.5 to 4.0 mils and a relative humidity of 40%.
- B. **Acceptable products** include Surebond SB-7000, or approved equal.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. **Examine exposed subgrades** and subbase surfaces for compliance with requirements for dimensional, grading, and elevation tolerances.
- B. **Proceed with concrete pavement** operations only after nonconforming conditions have been corrected and subgrade is ready to receive pavement.

3.2 PREPARATION

- A. **Protect trees**, shrubs, accessible ramps, and walls adjacent to work site. Exercise special care to avoid damaging tree roots and disturbing the existing accessible ramps under work areas. Obtain permission of Architect prior to cutting any tree roots.
- B. **Reset granite** curbing that is out of alignment. For resetting, a bed of DHSS class "DD" concrete shall be placed in a trench to a thickness of 3" min. as may be required to bring curbing to proper grade and to requirements of DHSS, paragraph 485 (C). Where relevant, finish grade of curbing shall be flush with grade of sidewalks to conform to drainage flow, except as directed at the site.
- C. **Protect all granite curbs** that abut work. Upon completion of the resetting of curbs that are out of alignment, cover granite curbs with heavy gauge polyethylene and seal so that no dampness from new concrete contacts granite. Maintain protection during length of Contract.
- D. **Remove soil** in designated work areas where new sidewalks are indicated and promptly dispose of off-site.
- E. **Remove designated existing sidewalks** by blocks or sections. Using masonry saws, cut along existing designated joints to minimum depth of 2"; demolish areas of defective concrete between cut lines and remove debris. Do not damage sidewalks indicated to remain. Dispose of debris off site in lawful manner. Unless otherwise permitted by the Architect, concrete sections shall be removed and resulting joint shall occur at:
 - 1. Tooled joints.
 - 2. Expansion or Contraction joints.
 - 3. Change in plane.
 - 4. Similar areas for logical break, as determined by the Architect.
- F. **New joint** shall replicate function of joint being replaced.
- G. **Grade subgrade area**, if required, to depth necessary to comply with specifications. Remove any unsuitable material encountered and replace with approved material, furnished by Contractor, as directed by the Architect.
- H. **Remove loose material** from compacted subbase surface immediately before placing concrete.

3.3 EDGE FORMS AND SCREED CONSTRUCTION

- A. **Set, brace, and secure edge forms**, bulkheads, and intermediate screed guides for pavement to required lines, grades, and elevations. Install forms to allow continuous progress of work and so forms can remain in place at least 24 hours after concrete placement.
- B. **Clean forms** after each use and coat with form-release agent to ensure separation from concrete without damage.

3.4 STEEL REINFORCEMENT

- A. **General:** Comply with ACI 301 for fabricating, placing, and supporting reinforcement.
- B. **Clean reinforcement** of loose rust and mill scale, earth, ice, or other bond-reducing materials.
- C. **Accurately position**, support and secure reinforcement against displacement. Locate and support reinforcement with bar supports to maintain minimum concrete cover. Do not tack weld crossing reinforcement bars.
- D. **Install welded wire reinforcement** in lengths as long as practicable. Lap adjoining pieces at least one full mesh, and lace splices with wire. Offset laps of adjoining widths to prevent continuous laps in either direction.
- E. **Install fabricated bar mats** in lengths as long as practicable. Handle units to keep them flat and free of distortions. Straighten bends, kinks, and other irregularities, or replace units as required before placement. Set mats for a minimum 2-inch (50-mm) overlap of adjacent mats.

3.5 JOINTS

- A. **General:** Form construction, isolation, and contraction joints and tool edgings true to line with faces perpendicular to surface plane of concrete. Construct transverse joints at right angles to centerline, unless otherwise indicated.
 - 1. When joining existing pavement, place transverse joints to align with previously placed joints, unless otherwise indicated.
- B. **Construction Joints:** Set construction joints at side and end terminations of pavement and at locations where pavement operations are stopped for more than one-half hour unless pavement terminates at isolation joints.
 - 1. Continue steel reinforcement across construction joints, unless otherwise indicated. Do not continue reinforcement through sides of pavement strips, unless otherwise indicated.
 - 2. Provide tie bars at sides of pavement strips where indicated.
 - 3. **Butt Joints:** Use bonding agent or adhesive at joint locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.
 - 4. **Keyed Joints:** Provide preformed keyway-section forms or bulkhead forms with keys, where indicated. Embed keys at least 1-1/2 inches (38 mm) into concrete.
 - 5. **Doweled Joints:** Install dowel bars and support assemblies at joints where indicated. Lubricate or asphalt-coat one-half of dowel length to prevent concrete bonding to one side of joint.
- C. **Isolation Joints:** Form isolation joints of preformed joint-filler strips abutting concrete curbs, catch basins, manholes, inlets, structures, walks, other fixed objects, and where indicated.
 - 1. Extend joint fillers full width and depth of joint.
 - 2. Terminate joint filler not less than 1/2 inch (13 mm) or more than 1 inch (25 mm) below finished surface if joint sealant is indicated.
 - 3. Place top of joint filler flush with finished concrete surface if joint sealant is not indicated.

4. Furnish joint fillers in one-piece lengths. Where more than one length is required, lace or clip joint-filler sections together.
 5. Protect top edge of joint filler during concrete placement with metal, plastic, or other temporary preformed cap. Remove protective cap after concrete has been placed on both sides of joint.
- D. **Expansion Joints:** Locate expansion joints at intervals of 60 feet, unless otherwise indicated.
1. Provide Load Transfer Assemblies at every expansion joint, within new sidewalks and where new sidewalks abut existing sidewalks.
 2. Extend joint fillers full width and depth of joint.
 3. Terminate joint filler not less than ½ inch (13 mm) or more than 1 inch (25 mm) below finished surface if joint sealant is indicated.
 4. Place top of joint filler flush with finished concrete surface if joint sealant is not indicated.
 5. Furnish joint fillers in one-piece lengths. Where more than one length is required, lace or clip joint-filler sections together.
 6. Protect top edge of joint filler during concrete placement with metal, plastic, or other temporary preformed cap. Remove protective cap after concrete has been placed on both sides of joint.
- E. **Contraction Joints:** Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of the concrete thickness, to match jointing of existing adjacent concrete pavement or as specified by Architect.
1. Grooved Joints: Form contraction joints after initial floating by grooving and finishing each edge of joint with grooving tool to a 1/4-inch (6-mm) radius. Repeat grooving of contraction joints after applying surface finishes. Eliminate groover marks on concrete surfaces.

3.6 CONCRETE PLACEMENT/FINISHING

- A. **Inspection:** Before placing concrete, inspect completed formwork installation, steel reinforcement, and items to be embedded or cast in. Notify other trades to permit installation of their work.
- B. **Remove snow,** ice, or frost from subbase surface and reinforcement before placing concrete. Do not place concrete on frozen surfaces.
- C. **Moisten subgrade/subbase** to provide a uniform dampened condition at time concrete is placed. Do not place concrete around manholes or other structures until they are at required finish elevation and alignment.
- D. **Comply with ACI 301** requirements for measuring, mixing, transporting, and placing concrete.
- E. **Do not add water** to concrete during delivery or at Project site.
- F. **Do not add water** to fresh concrete after testing.
- G. **Deposit and spread** concrete in continuous operation between transverse joints with load transfer assemblies as far as practical. If interrupted for more than ½ hour, place construction joint. Sections more than 20' in length between transverse assemblies and 60' in length between load transfer assemblies will not be permitted. Remove such sections when directed by Architect.
- H. **Consolidate concrete** according to ACI 301 by mechanical vibrating equipment supplemented by hand spading, rodding, or tamping.
1. Consolidate concrete along face of forms and adjacent to transverse joints with an internal vibrator. Keep vibrator away from joint assemblies, reinforcement, or side forms. Use only square-faced shovels for hand spreading and consolidation. Consolidate with care to

prevent dislocating reinforcement, dowels, and joint devices.

- I. **Strike surface course** with straightedge resting on forms, work by screeding and wood floating until concrete presents smooth, well-compacted mass. Do not overwork concrete and bring excess water to surface. Check work with 10' straightedge as work proceeds and correct high/low spot defects. Do not sprinkle dry cement on any concrete surface.
- J. **Score joints** to conform to surrounding areas, where applicable score joints shall coincide with perpendicular-to-pedestrian-flow edges of tree openings. Other score joints shall be evenly placed at approximately ten feet on center (10' o.c.) . Make marking and Contraction joints accurately with tapered bar or plate. Width and depth of joints shall match existing work or shall be as approved by Architect.
- K. **Apply retarder** with low pressure spray over wearing surface according to manufacturer's recommendations to etch concrete approximately 1/16".
- L. **When concrete has set sufficiently**, immediately brush surface with narrow wire brushes, hose to expose aggregate, and broom to remove loosened materials. Exercise unusual care not to loosen or dislodge exposed aggregate. Do not over brush.
- M. **Patching** of newly installed exposed aggregate concrete surfaces will not be permitted. Cut out to nearest joint with power saw and remove defective concrete sections. Install new sections to replace cut out sections at no additional cost to the Government.
- N. **When adjoining pavement lanes** are placed in separate pours, do not operate equipment on concrete until pavement has attained 85 percent of its 28-day compressive strength.
- O. **Cold-Weather Placement:** Comply with ACI 306.1 and as follows. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.
 - 1. When air temperature has fallen to or is expected to fall below 40 deg F (4.4 deg C), uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50 deg F (10 deg C) and not more than 80 deg F (27 deg C) at point of placement.
 - 2. Do not use frozen materials or materials containing ice or snow.
 - 3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise specified and approved in mix designs.
- P. **Hot-Weather Placement:** Comply with ACI 301 and as follows when hot-weather conditions exist:
 - 1. Cool ingredients before mixing to maintain concrete temperature below 90 deg F (32 deg C) at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
 - 2. Cover steel reinforcement with water-soaked burlap so steel temperature will not exceed ambient air temperature immediately before embedding in concrete.
 - 3. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade moisture uniform without standing water, soft spots, or dry areas.

3.8 CONCRETE PROTECTION AND CURING

- A. **General:** Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.
- B. **Comply with ACI 306.1** for cold-weather protection.

- C. **Evaporation Retarder:** Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h (1 kg/sq. m x h) before and during finishing operations. Apply according to manufacturer's written instructions after placing and screeding concrete.
- D. **Begin curing** after finishing concrete but not before free water has disappeared from concrete surface.
- E. **Curing Methods:** Cure concrete by moisture curing, moisture-retaining-cover curing, curing compound, or a combination of these as follows:
 - 1. **Moist Curing:** Keep surfaces continuously moist for not less than seven days with the following materials:
 - a. Water.
 - b. Continuous water-fog spray.
 - c. Absorptive cover, water saturated and kept continuously wet. Cover concrete surfaces and edges with 12-inch (300-mm) lap over adjacent absorptive covers.
 - 2. **Moisture-Retaining-Cover Curing:** Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches (300 mm), and sealed by waterproof tape or adhesive. Immediately repair any holes or tears during curing period using cover material and waterproof tape.
 - 3. **Curing Compound:** Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.
- F. **After curing,** wash and scrub exposed concrete surfaces with diluted muriatic acid until exposed surfaces are free from cement film and discoloration. Following cleaning, wash with clear water. The diluted muriatic acid shall be collected and disposed of properly. Run-off with a pH of 2 or below shall be treated as hazardous waste, and disposed of off-site in accord with all applicable regulations.
- G. **Seal pavement** according to sealer manufacturer's recommendations. Do not apply sealer prior to passing of required cure time. Remove all excess and spillage immediately.

3.9 PAVEMENT TOLERANCES

- A. **Comply with tolerances** of ACI 117 and as follows:
 - 1. Elevation: 1/4 inch .
 - 2. Thickness: Plus 3/8 inch, minus 1/4 inch.
 - 3. Surface: Gap below 10-foot- long, unlevelled straightedge not to exceed 1/4 inch.
 - 4. Lateral Alignment and Spacing of Tie Bars and Dowels: 1 inch.
 - 5. Vertical Alignment of Tie Bars and Dowels: 1/4 inch.
 - 6. Alignment of Tie-Bar End Relative to Line Perpendicular to Pavement Edge: 1/2 inch.
 - 7. Alignment of Dowel-Bar End Relative to Line Perpendicular to Pavement Edge: Length of dowel 1/4 inch per 12 inches.
 - 8. Contraction Joint Depth: Plus 1/4 inch, no minus.
 - 9. Joint Width: Plus 1/8 inch, no minus.

3.10 FIELD QUALITY CONTROL

- A. **Testing Agency:** Engage a qualified independent testing and inspecting agency to sample materials, perform tests, and submit test reports during concrete placement according to requirements specified in this Article.

- B. **Testing Services:** Testing of composite samples of fresh concrete obtained according to ASTM C 172 shall be performed according to the following requirements:
1. **Testing Frequency:** Obtain one composite sample for each day's pour of each concrete mix exceeding 5 cu. yd. (4 cu. m), but less than 25 cu. yd. (19 cu. m), plus one set for each additional 50 cu. yd. (38 cu. m) or fraction thereof.
 - a. When frequency of testing will provide fewer than five compressive-strength tests for each concrete mix, testing shall be conducted from at least five randomly selected batches or from each batch if fewer than five are used.
 2. **Slump:** ASTM C 143; one test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mix. Perform additional tests when concrete consistency appears to change.
 3. **Air Content:** ASTM C 231, pressure method, for normal-weight concrete; one test for each composite sample, but not less than one test for each day's pour of each concrete mix.
 4. **Concrete Temperature:** ASTM C 1064; one test hourly when air temperature is 40 deg F (4.4 deg C) and below and when 80 deg F (27 deg C) and above, and one test for each composite sample.
 5. **Compression Test Specimens:** ASTM C 31/C 31M; cast and laboratory cure one set of four standard cylinder specimens for each composite sample.
 6. **Compressive-Strength Tests:** ASTM C 39; test two laboratory-cured specimens at 7 days and two at 28 days.
 - a. Test two specimens at 7 days and two at 28 days.
 - b. A compressive-strength test shall be the average compressive strength from two specimens obtained from same composite sample and tested at age indicated.
- C. **Strength of concrete** will be satisfactory if every average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than 500 psi (3.4 MPa).
- D. **Test results** shall be reported in writing to Architect, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mix proportions and materials, compressive breaking strength, and type of break for both 7-and 28-day tests.
- E. **Nondestructive Testing:** Impact hammer, sonoscope, or other nondestructive device may be permitted by Architect but will not be used as sole basis for approval or rejection of concrete.
- F. **Additional Tests:** Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as directed by Architect. Testing and inspecting agency may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42 or by other methods as directed by Architect.

3.11 REPAIRS AND PROTECTION

- A. **Remove and replace concrete** pavement that is broken, damaged, or defective or that does not comply with requirements in this Section.
- B. **Drill test cores**, where directed by Architect, when necessary to determine magnitude of cracks or defective areas. Fill drilled core holes in satisfactory pavement areas with portland cement concrete bonded to pavement with adhesive.

- C. **Protect concrete from damage.** Exclude pedestrian traffic from pavement for at least 3 days after placement. Exclude vehicular traffic from pavement for at least 14 days after placement. When construction traffic is permitted, maintain pavement as clean as possible by removing surface stains and spillage of materials as they occur.
- D. **Maintain concrete pavement** free of stains, discoloration, dirt, and other foreign material. Sweep concrete pavement not more than two days before date scheduled for Substantial Completion inspections.

3.12 CLEANUP:

- A. **Remove all tools,** unused materials and debris from project, and leave area broom clean.
- B. **All excess concrete** shall be cleaned from gutters, abutting sidewalks, streets and silt fences and unusual care shall be taken to prevent diluted concrete from entering catch basins.
- C. **Repair or restore** to new condition lawn areas, trees, or shrubs adjacent to work site damaged by operations under this Contract.

END OF SECTION 32 13 13.13

SECTION 32 12 73 - PAVEMENT JOINT SEALANTS**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

- A. **Drawings** and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. **This Section** includes the following:
 - 1. Expansion, isolation, and contraction joints within Portland cement concrete pavement.
 - 2. Joints between Portland cement concrete and asphalt pavement.
 - 3. Joints at pavement edges adjacent to other materials and construction.
- B. **Related Sections** include the following:
 - 1. Division 32 Section EXPOSED AGGREGATE CONCRETE for constructing joints in concrete paving.
 - 2. Division 32 Section CEMENT CONCRETE PAVING for constructing joints in concrete paving.

1.3 SUBMITTALS

- A. **Product Data:** For each joint-sealant product indicated.
- B. **Samples for Verification:** For each type and color of joint sealant required. Install joint-sealant samples in ½-inch- (13-mm-) wide joints formed between two 6-inch- (150-mm-) long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.
- C. **Product Certificates:** Signed by manufacturers of joint sealants certifying that products furnished comply with requirements and are suitable for the use indicated.
- D. **Product Test Reports:** From a qualified testing agency indicating joint sealants comply with requirements, based on comprehensive testing of current product formulations.

1.4 QUALITY ASSURANCE

- A. **Installer Qualifications:** An experienced installer who has specialized in installing joint sealants similar in material, design, and extent to those indicated for this Project and whose work has resulted in joint-sealant installations with a record of successful in-service performance.
- B. **Source Limitations:** Obtain each type of joint sealant through one source from a single manufacturer.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. **Deliver materials** to Project site in original unopened containers or bundles with labels indicating manufacturer, product name and designation, color, expiration date, pot life, curing time, and mixing instructions for multi-component materials.
- B. **Store and handle** materials to comply with manufacturer's written instructions to prevent their

deterioration or damage due to moisture, high or low temperatures, contaminants, or other causes.

1.6 PROJECT CONDITIONS

- A. **Environmental Limitations:** Do not proceed with installation of joint sealants under the following conditions:
 - 1. When ambient and substrate temperature conditions are outside limits permitted by joint sealant manufacturer.
 - 2. When ambient and substrate temperature conditions are outside limits permitted by joint sealant manufacturer or are below 40 deg F (4.4 deg C).
 - 3. When joint substrates are wet.
- B. **Joint-Width Conditions:** Do not proceed with installation of joint sealants where joint widths are less than that allowed by joint sealant manufacturer for application indicated.
- C. **Joint-Substrate Conditions:** Do not proceed with installation of joint sealants until contaminants capable of interfering with their adhesion are removed from joint substrates.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

- A. **Compatibility:** Provide joint sealants, backing materials, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by joint sealant manufacturer based on testing and field experience.
- B. **Colors of Exposed Joint Sealants:** As selected by Architect from manufacturer's full range for this characteristic.

2.2 COLD-APPLIED JOINT SEALANTS

- A. **Type NS Silicone Sealant for Concrete:** Single-component, low-modulus, neutral-curing, nonsag silicone sealant complying with ASTM D 5893 for Type NS.
- B. **Type SL Silicone Sealant for Concrete and Asphalt:** Single-component, low-modulus, neutral-curing, self-leveling silicone sealant complying with ASTM D 5893 for Type SL.
- C. **Multi-component Low-Modulus Sealant for Concrete and Asphalt:** Proprietary formulation consisting of reactive petropolymer and activator components producing a pourable, self-leveling sealant.
- D. **Available Products:** Subject to compliance with requirements, cold-applied joint sealants that may be incorporated into the Work include, but are not limited to, the following:

2.3 JOINT-SEALANT BACKER MATERIALS

- A. **General:** Provide joint-sealant backer materials that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by joint sealant manufacturer based on field experience and laboratory testing.
- B. **Round Backer Rods for Cold-Applied Sealants:** ASTM D 5249, Type 3, of diameter and density required to control sealant depths and prevent bottom-side adhesion of sealant.

2.4 PRIMERS

- A. **Primers:** Product recommended by joint sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint- sealant-substrate tests and field tests.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. **Examine joints** indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.
- B. **Proceed with installation** only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. **Surface Cleaning of Joints:** Clean out joints immediately before installing joint sealants to comply with joint sealant manufacturer's written instructions.
- B. **Joint Priming:** Prime joint substrates where indicated or where recommended in writing by joint sealant manufacturer, based on preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.

3.3 INSTALLATION OF JOINT SEALANTS

- A. **General:** Comply with joint sealant manufacturer's written installation instructions applicable to products and applications indicated, unless more stringent requirements apply.
- B. **Install backer materials** of type indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
 - 1. Do not leave gaps between ends of backer materials.
 - 2. Do not stretch, twist, puncture, or tear backer materials.
 - 3. Remove absorbent backer materials that have become wet before sealant application and replace them with dry materials.
- C. **Install sealants** by proven techniques to comply with the following and at the same time backings are installed:
 - 1. Place sealants so they directly contact and fully wet joint substrates.
 - 2. Completely fill recesses provided for each joint configuration.
 - 3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- D. **Tooling of Nonsag Sealants:** Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
 - 1. Remove excess sealants from surfaces adjacent to joint.

- 2. Use tooling agents that are approved in writing by joint sealant manufacturer and that do not discolor sealants or adjacent surfaces.
- E. **Provide joint configuration** to comply with joint sealant manufacturer's written instructions, unless otherwise indicated.
- F. **Provide recessed joint** configuration for silicone sealants of recess depth and at locations indicated.

3.4 **CLEANING**

- A. **Clean off** excess sealants or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved by manufacturers of joint sealants and of products in which joints occur.

3.5 **PROTECTION**

- A. **Protect joint sealants** during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from the original work.

END OF SECTION 32 12 73

SECTION 02751 - CEMENT CONCRETE PAVEMENT**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

- A. **Drawings** and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. **This Section** includes exterior cement concrete pavement for the following:
1. Driveways and roadways.
 2. Parking lots.
 3. Curbs and gutters.
 4. Walkways.
 5. Unit paver base.
- B. **Related Sections** include the following:
1. Division 31 Section EARTHWORK for subgrade preparation, grading, and subbase course.
 2. Division 32 Section EXPOSED AGGREGATE CONCRETE PAVEMENT.
 3. Division 32 Section PAVEMENT JOINT SEALANTS for joint sealants of joints in concrete pavement and at isolation joints of concrete pavement with adjacent construction.

1.3 DEFINITIONS

- A. **Cementitious Materials:** Portland cement alone.

1.4 SUBMITTALS

- A. **Product Data:** For each type of manufactured material and product indicated.
- B. **Design Mixtures:** For each concrete pavement mixture. Include alternate mixture designs when characteristics of materials, project conditions, weather, test results, or other circumstances warrant adjustments.
- C. **Load Transfer Assembly:** Typical assembly and method of installation
- D. **Qualification Data:** For manufacturer and testing agency.
- E. **Material Certificates:** Signed by manufacturers certifying that each of the following materials complies with requirements:
1. Cementitious materials.
 2. Steel reinforcement and reinforcement accessories.
 3. Fiber reinforcement.
 4. Admixtures.
 5. Curing compounds.
 6. Applied finish materials.
 7. Bonding agent or adhesive.
 8. Joint fillers.
- F. **Field quality-control** test reports.

- G. **Minutes** of pre-installation conference.

1.5 QUALITY ASSURANCE

- A. **Installer Qualifications:** A Contractor who qualifies as a "Specialist" under the provisions of Division 1 Section GENERAL REQUIREMENTS.
- B. **Manufacturer Qualifications:** Manufacturer of ready-mixed concrete products who complies with ASTM C 94/C 94M requirements for production facilities and equipment.
1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities."
- C. **Codes and Standards:**
1. ACI 301 "Specifications for Structural Concrete"; comply with applicable provisions as otherwise indicated.
 2. District of Columbia Department of Highways and Traffic, "Standard Specifications for Highways and Structures" (DHSS). Paragraphs of DHSS referring to basis of payment shall not apply to this Work.
- D. **Mockups:** Cast mockups of full-size sections of concrete pavement to demonstrate typical joints, surface finish, texture, color, and standard of workmanship.
1. Build mockups in the location and of the size indicated or, if not indicated, as directed by Architect.
 2. Notify Architect seven days in advance of dates and times when mockups will be constructed.
 3. Obtain Architect's approval of mockups before starting construction.
 4. Demolish and remove approved mockups from the site when directed by Architect.
 5. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.
- E. **Pre-installation Conference:** Conduct conference at Project site to comply with requirements in Division 1 Section GENERAL REQUIREMENTS.
1. Before submitting design mixtures, review concrete pavement mixture design and examine procedures for ensuring quality of concrete materials and concrete pavement construction practices. Require representatives, including the following, of each entity directly concerned with concrete pavement, to attend conference:
 - a. Contractor's superintendent.
 - b. Independent testing agency responsible for concrete design mixtures.
 - c. Ready-mix concrete producer.
 - d. Concrete pavement subcontractor.
- F. **Source Limitations:** Obtain each type or class of cementitious materials of the same brand from the same manufacturer's plant and each aggregate from one source.

1.6 PROJECT CONDITIONS

- A. **Traffic Control:** Maintain access for vehicular and pedestrian traffic as required for other construction activities.

- B. **Curb Realignment:** All curbs abutting sidewalks to be replaced shall be realigned to proper grade. If any curbs are broken or chipped so as to create a hazard, the curbs shall be replaced with like curbing. All hazardous curbs shall be agreed upon with the Architect.

PART 2 - PRODUCTS

2.1 FORMS

- A. **Form Materials:** Plywood, metal, metal-framed plywood, or other approved panel-type materials to provide full-depth, continuous, straight, smooth exposed surfaces.
 - 1. Use flexible or curved forms for curves with a radius 100 feet (30.5 m) or less.
- B. **Form-Release Agent:** Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.

2.2 STEEL REINFORCEMENT

- A. **Plain-Steel Welded Wire Reinforcement:** Plain steel, ASTM A 185, flat sheet, 6" x 6", No. 8 by No. 8, unless otherwise indicated, placed 1-1/2" below top of slab.
- B. **Deformed-Steel Welded Wire Reinforcement:** ASTM A 497, flat sheet.
- C. **Reinforcing Bars:** ASTM A 615/A 615M, Grade 60 (Grade 420); deformed.
- D. **Steel Bar Mats:** ASTM A 184/A 184M; with ASTM A 615/A 615M, Grade 60 (Grade 420), deformed bars; assembled with clips.
- E. **Plain Steel Wire:** ASTM A 82, as drawn.
- F. **Deformed-Steel Wire:** ASTM A 496.
- G. **Joint Dowel Bars:** Plain steel bars, ASTM A 615/A 615M, Grade 60 (Grade 420). Cut bars true to length with ends square and free of burrs.
- H. **Tie Bars:** ASTM A 615/A 615M, Grade 60 (Grade 420), deformed.
- I. **Hook Bolts:** ASTM A 307, Grade A (ASTM F 568M, Property Class 4.6), internally and externally threaded. Design hook-bolt joint assembly to hold coupling against pavement form and in position during concreting operations, and to permit removal without damage to concrete or hook bolt.
- J. **Bar Supports:** Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars, welded wire reinforcement, and dowels in place. Manufacture bar supports according to CRSI's "Manual of Standard Practice" from steel wire, plastic, or precast concrete of greater compressive strength than concrete, and as follows:
 - 1. Equip wire bar supports with sand plates or horizontal runners where base material will not support chair legs.

2.3 CONCRETE MATERIALS

- A. **Cementitious Material:** Use the following cementitious materials, of the same type, brand, and source throughout the Project:

1. Portland Cement: ASTM C 150
- B. **Normal-Weight Aggregates:** ASTM C 33, Class 4S coarse aggregate, uniformly graded. Provide aggregates from a single source.
 1. Maximum Coarse-Aggregate Size: 3/4 inch (19 mm) nominal.
 2. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement. Color shall be brown to yellow.
- C. **Water:** ASTM C 94/C 94M.
- D. **Air-Entraining Admixture:** ASTM C 260.
- E. **Chemical Admixtures:** Provide admixtures certified by manufacturer to be compatible with other admixtures and to contain not more than 0.1 percent water-soluble chloride ions by mass of cementitious material.
 1. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.
 2. Retarding Admixture: ASTM C 494/C 494M, Type B.
 3. Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.
 4. High-Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type F.
 5. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type G.
 6. Plasticizing and Retarding Admixture: ASTM C 1017/C 1017M, Type II.

2.4 CURING MATERIALS

- A. **Absorptive Cover:** AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. (305 g/sq. m) dry.
- B. **Moisture-Retaining Cover:** ASTM C 171, polyethylene film or white burlap-polyethylene sheet.
- C. **Water:** Potable.
- D. **Evaporation Retarder:** Waterborne, monomolecular film forming; manufactured for application to fresh concrete.
 1. **Products:**
 - a. ChemMasters; Spray-Film.
 - b. Conspec Marketing & Manufacturing Co., Inc.; Aquafilm.
 - c. Dayton Superior Corporation; Sure Film.
 - d. Euclid Chemical Company (The); Eucobar.
 - e. Lambert Corporation; Lambco Skin.
 - f. L&M Construction Chemicals, Inc.; E-Con.
 - g. Sika Corporation, Inc.; SikaFilm.
 - h. Or Approved Equal.

- E. **Clear Waterborne Membrane-Forming Curing Compound:** ASTM C 309, Type 1, Class B.
- F. **White Waterborne Membrane-Forming Curing Compound:** ASTM C 309, Type 2, Class B.

2.5 RELATED MATERIALS

- A. **Expansion- and Isolation-Joint-Filler Strips:** Pre-formed cork or self-expanding cork strips complying with ASTM D 1752 for Type II, 1/2" thick x 6" wide, trimmed to fit finish height.

- B. **Bonding Agent:** ASTM C 1059, Type II, non-redispersible, acrylic emulsion or styrene butadiene.

2.6 CONCRETE MIXTURES

- A. **Prepare design mixtures**, proportioned according to ACI 301, for each type and strength of normal-weight concrete determined by either laboratory trial mixes or field experience. No carbon black, calcium chloride or any other additive shall be used in mix other than admixtures specified above.
1. Use a qualified independent testing agency for preparing and reporting proposed concrete mixture designs for the trial batch method.
 2. Use aggregate combination to result in brown to yellow finish color. Architect will approve final color from mockups.
- B. **Proportion mixtures** to provide normal-weight concrete with the following properties:
1. Compressive Strength (28 Days): 4,500 psi (31 MPa).
 2. Maximum Water-Cementitious Materials Ratio at Point of Placement: 0.45.
 3. Slump Limit: 4 inches (125 mm), plus or minus 1 inch (25 mm).
- C. **Add air-entraining admixture** at manufacturer's prescribed rate to result in normal-weight concrete at point of placement having an air content as follows:
1. Air Content: 6 percent plus or minus 1.5 percent for 3/4-inch (19-mm) nominal maximum aggregate size.
- D. **Limit water-soluble**, chloride-ion content in hardened concrete to 0.15 percent by weight of cement.
- E. **Chemical Admixtures:** Use admixtures according to manufacturer's written instructions.
1. Use water-reducing admixture in concrete, as required, for placement and workability.
 2. Use water-reducing and retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.

2.7 CONCRETE MIXING

- A. **Ready-Mixed Concrete:** Measure, batch, and mix concrete materials and concrete according to ASTM C 94/C 94M. Furnish batch certificates for each batch discharged and used in the Work.
1. When air temperature is between 85 deg F (30 deg C) and 90 deg F (32 deg C), reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F (32 deg C), reduce mixing and delivery time to 60 minutes.
- B. **Project-Site Mixing:** Only permitted with written permission from Architect.

PART 3 - EXECUTION**3.1 EXAMINATION**

- A. **Examine exposed subgrades** and subbase surfaces for compliance with requirements for dimensional, grading, and elevation tolerances.
- B. **Proceed with concrete pavement** operations only after nonconforming conditions have been corrected and subgrade is ready to receive pavement.

3.2 PREPARATION

- A. **Protect trees**, shrubs, accessible ramps, and walls adjacent to work site. Exercise special care to avoid damaging tree roots and disturbing the existing accessible ramps under work areas. Obtain permission of Architect prior to cutting any tree roots.
- B. **Reset granite** curbing that is out of alignment. For resetting, a bed of DHSS class "DD" concrete shall be placed in a trench to a thickness of 3" min. as may be required to bring curbing to proper grade and to requirements of DHSS, paragraph 485 (C). Where relevant, finish grade of curbing shall be flush with grade of sidewalks to conform to drainage flow, except as directed at the site.
- C. **Protect all granite curbs** that abut work. Upon completion of the resetting of curbs that are out of alignment, cover granite curbs with heavy gauge polyethylene and seal so that no dampness from new concrete contacts granite. Maintain protection during length of Contract.
- D. **Remove soil** in designated work areas where new sidewalks are indicated and promptly dispose of off-site.
- E. **Remove designated existing sidewalks** by blocks or sections. Using masonry saws, cut along existing designated joints to minimum depth of 2"; demolish areas of defective concrete between cut lines and remove debris. Do not damage sidewalks indicated to remain. Dispose of debris off site in lawful manner. Unless otherwise permitted by the Architect, concrete sections shall be removed and resulting joint shall occur at:
 - 1. Tooled joints.
 - 2. Expansion or Contraction joints.
 - 3. Change in plane.
 - 4. Similar areas for logical break, as determined by the Architect.
- F. **New joint** shall replicate function of joint being replaced.
- G. **Grade subgrade area**, if required, to depth necessary to comply with specifications. Remove any unsuitable material encountered and replace with approved material, furnished by Contractor, as directed by the Architect.
- H. **Remove loose material** from compacted subbase surface immediately before placing concrete.

3.3 EDGE FORMS AND SCREED CONSTRUCTION

- A. **Set, brace, and secure edge forms**, bulkheads, and intermediate screed guides for pavement to required lines, grades, and elevations. Install forms to allow continuous progress of work and so forms can remain in place at least 24 hours after concrete placement.
- B. **Clean forms** after each use and coat with form-release agent to ensure separation from concrete without damage.

3.4 STEEL REINFORCEMENT

- A. **General:** Comply with ACI 301 for fabricating, placing, and supporting reinforcement.
- B. **Clean reinforcement** of loose rust and mill scale, earth, ice, or other bond-reducing materials.
- C. **Accurately position,** support and secure reinforcement against displacement. Locate and support reinforcement with bar supports to maintain minimum concrete cover. Do not tack weld crossing reinforcement bars.
- D. **Install welded wire reinforcement** in lengths as long as practicable. Lap adjoining pieces at least one full mesh, and lace splices with wire. Offset laps of adjoining widths to prevent continuous laps in either direction.
- E. **Zinc-Coated Reinforcement:** Use galvanized steel wire ties to fasten zinc-coated reinforcement. Repair cut and damaged zinc coatings with zinc repair material.
- F. **Install fabricated bar mats** in lengths as long as practicable. Handle units to keep them flat and free of distortions. Straighten bends, kinks, and other irregularities, or replace units as required before placement. Set mats for a minimum 2-inch (50-mm) overlap of adjacent mats.

3.5 JOINTS

- A. **General:** Form construction, isolation, and contraction joints and tool edgings true to line with faces perpendicular to surface plane of concrete. Construct transverse joints at right angles to centerline, unless otherwise indicated.
 - 1. When joining existing pavement, place transverse joints to align with previously placed joints, unless otherwise indicated.
- B. **Construction Joints:** Set construction joints at side and end terminations of pavement and at locations where pavement operations are stopped for more than one-half hour unless pavement terminates at isolation joints.
 - 1. Continue steel reinforcement across construction joints, unless otherwise indicated. Do not continue reinforcement through sides of pavement strips, unless otherwise indicated.
 - 2. Provide tie bars at sides of pavement strips where indicated.
 - 3. **Butt Joints:** Use bonding agent or adhesive at joint locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.
 - 4. **Keyed Joints:** Provide preformed keyway-section forms or bulkhead forms with keys, where indicated. Embed keys at least 1-1/2 inches into concrete.
 - 5. **Doweled Joints:** Install dowel bars and support assemblies at joints where indicated. Lubricate or asphalt-coat one-half of dowel length to prevent concrete bonding to one side of joint.
- C. **Isolation Joints:** Form isolation joints of preformed joint-filler strips abutting concrete curbs, catch basins, manholes, inlets, structures, walks, other fixed objects, and where indicated.
 - 1. Extend joint fillers full width and depth of joint.
 - 2. Terminate joint filler not less than 1/2 inch or more than 1 inch below finished surface if joint sealant is indicated.
 - 3. Place top of joint filler flush with finished concrete surface if joint sealant is not indicated.
 - 4. Furnish joint fillers in one-piece lengths. Where more than one length is required, lace or clip joint-filler sections together.
 - 5. Protect top edge of joint filler during concrete placement with metal, plastic, or other

temporary preformed cap. Remove protective cap after concrete has been placed on both sides of joint.

- D. **Expansion Joints:** Locate expansion joints at intervals of 60 feet, unless otherwise indicated.
1. Provide Load Transfer Assemblies at every expansion joint, within new sidewalks and where new sidewalks abut existing sidewalks.
 2. Extend joint fillers full width and depth of joint.
 3. Terminate joint filler not less than 1/2 inch or more than 1 inch below finished surface if joint sealant is indicated.
 4. Place top of joint filler flush with finished concrete surface if joint sealant is not indicated.
 5. Furnish joint fillers in one-piece lengths. Where more than one length is required, lace or clip joint-filler sections together.
 6. Protect top edge of joint filler during concrete placement with metal, plastic, or other temporary preformed cap. Remove protective cap after concrete has been placed on both sides of joint.
- E. **Contraction Joints:** Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of the concrete thickness, to match jointing of existing adjacent concrete pavement or as specified by Architect.
1. **Grooved Joints:** Form contraction joints after initial floating by grooving and finishing each edge of joint with grooving tool to a 1/4-inch (6-mm) radius. Repeat grooving of contraction joints after applying surface finishes. Eliminate groover marks on concrete surfaces.
- F. **Edging:** Tool edges of pavement, gutters, curbs, and joints in concrete after initial floating with an edging tool to a 1/4-inch (6-mm) radius. Repeat tooling of edges after applying surface finishes. Eliminate tool marks on concrete surfaces.

3.6 CONCRETE PLACEMENT

- A. **Inspection:** Before placing concrete, inspect completed formwork installation, steel reinforcement, and items to be embedded or cast in. Notify other trades to permit installation of their work.
- B. **Remove snow,** ice, or frost from subbase surface and reinforcement before placing concrete. Do not place concrete on frozen surfaces.
- C. **Moisten subbase** to provide a uniform dampened condition at time concrete is placed. Do not place concrete around manholes or other structures until they are at required finish elevation and alignment.
- D. **Comply with ACI 301** requirements for measuring, mixing, transporting, and placing concrete.
- E. **Do not add water** to concrete during delivery or at Project site.
- F. **Do not add water** to fresh concrete after testing.
- G. **Deposit and spread** concrete in continuous operation between transverse joints with load transfer assemblies as far as practical. If interrupted for more than 1/2 hour, place construction joint. Sections more than 20' in length between transverse assemblies and 60' in length between load transfer assemblies will not be permitted. Remove such sections when directed by Architect.
- H. **Consolidate concrete** according to ACI 301 by mechanical vibrating equipment supplemented by

- hand spading, rodding, or tamping.
1. Consolidate concrete along face of forms and adjacent to transverse joints with an internal vibrator. Keep vibrator away from joint assemblies, reinforcement, or side forms. Use only square-faced shovels for hand spreading and consolidation. Consolidate with care to prevent dislocating reinforcement, dowels, and joint devices.
- I. **Screed pavement surfaces** with a straightedge and strike off.
 - J. **Commence initial floating** using bull floats or darbies to impart an open textured and uniform surface plane before excess moisture or bleed water appears on the surface. Do not further disturb concrete surfaces before beginning finishing operations or spreading surface treatments.
 - K. **Curbs and Gutters:** Produce curbs and gutters to required cross section, lines, grades, finish, and jointing as specified for formed concrete. If results are not approved, remove and replace with formed concrete.
 - L. **When adjoining pavement lanes** are placed in separate pours, do not operate equipment on concrete until pavement has attained 85 percent of its 28-day compressive strength.
 - M. **Cold-Weather Placement:** Comply with ACI 306.1 and as follows. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.
 1. When air temperature has fallen to or is expected to fall below 40 deg F (4.4 deg C), uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50 deg F (10 deg C) and not more than 80 deg F (27 deg C) at point of placement.
 2. Do not use frozen materials or materials containing ice or snow.
 3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise specified and approved in mix designs.
 - N. **Hot-Weather Placement:** Comply with ACI 301 and as follows when hot-weather conditions exist:
 1. Cool ingredients before mixing to maintain concrete temperature below 90 deg F (32 deg C) at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
 2. Cover steel reinforcement with water-soaked burlap so steel temperature will not exceed ambient air temperature immediately before embedding in concrete.
 3. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade moisture uniform without standing water, soft spots, or dry areas.

3.7 FINISHING

- A. **General:** Do not add water to concrete surfaces during finishing operations.
- B. **Float Finish:** Begin the second floating operation when bleed-water sheen has disappeared and concrete surface has stiffened sufficiently to permit operations. Float surface with power-driven floats, or by hand floating if area is small or inaccessible to power units. Finish surfaces to true planes. Cut down high spots and fill low spots. Refloat surface immediately to uniform granular texture.
 1. **Burlap Finish:** Drag a seamless strip of damp burlap across float-finished concrete,

- perpendicular to line of traffic, to provide a uniform, gritty texture.
 - 2. **Medium-to-Fine-Textured Broom Finish:** Draw a soft bristle broom across float-finished concrete surface perpendicular to line of traffic to provide a uniform, fine-line texture.
 - 3. **Medium-to-Coarse-Textured Broom Finish:** Provide a coarse finish by striating float-finished concrete surface 1/16 to 1/8 inch (1.6 to 3 mm) deep with a stiff-bristled broom, perpendicular to line of traffic.
- C. **Driveway Ramps:** All ramps shall be scored in a 6" x 6" geometric pattern, parallel to the curb. Coordinate joint profile with Architect.

3.8 CONCRETE PROTECTION AND CURING

- A. **General:** Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.
- B. **Comply with ACI 306.1** for cold-weather protection.
- C. **Evaporation Retarder:** Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h (1 kg/sq. m x h) before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.
- D. **Begin curing** after finishing concrete but not before free water has disappeared from concrete surface.
- E. **Curing Methods:** Cure concrete by moisture curing, moisture-retaining-cover curing, curing compound, or a combination of these as follows:
- 1. **Moist Curing:** Keep surfaces continuously moist for not less than seven days with the following materials:
 - a. Water.
 - b. Continuous water-fog spray.
 - c. Absorptive cover, water saturated and kept continuously wet. Cover concrete surfaces and edges with 12-inch (300-mm) lap over adjacent absorptive covers.
 - 2. **Moisture-Retaining-Cover Curing:** Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches (300 mm), and sealed by waterproof tape or adhesive. Immediately repair any holes or tears during curing period using cover material and waterproof tape.
 - 3. **Curing Compound:** Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.

3.9 PAVEMENT TOLERANCES

- A. **Comply with tolerances** of ACI 117 and as follows:
- 1. Elevation: 1/4 inch (6 mm).
 - 2. Thickness: Plus 3/8 inch (10 mm), minus 1/4 inch (6 mm).
 - 3. Surface: Gap below 10-foot- (3-m-) long, unlevelled straightedge not to exceed 1/4 inch (6 mm).
 - 4. Lateral Alignment and Spacing of Tie Bars and Dowels: 1 inch (25 mm).
 - 5. Vertical Alignment of Tie Bars and Dowels: 1/4 inch (6 mm).

6. Alignment of Tie-Bar End Relative to Line Perpendicular to Pavement Edge: 1/2 inch (13 mm).
7. Alignment of Dowel-Bar End Relative to Line Perpendicular to Pavement Edge: Length of dowel 1/4 inch per 12 inches (6 mm per 300 mm).
8. Contraction Joint Depth: Plus 1/4 inch (6 mm), no minus.
9. Joint Width: Plus 1/8 inch (3 mm), no minus.

3.10 FIELD QUALITY CONTROL

- A **Testing Agency:** Engage a qualified independent testing and inspecting agency to sample materials, perform tests, and submit test reports during concrete placement according to requirements specified in this Article.
- B **Testing Services:** Testing of composite samples of fresh concrete obtained according to ASTM C 172 shall be performed according to the following requirements:
1. **Testing Frequency:** Obtain one composite sample for each day's pour of each concrete mix exceeding 5 cu. yd. (4 cu. m), but less than 25 cu. yd. (19 cu. m), plus one set for each additional 50 cu. yd. (38 cu. m) or fraction thereof.
 - a. When frequency of testing will provide fewer than five compressive-strength tests for each concrete mix, testing shall be conducted from at least five randomly selected batches or from each batch if fewer than five are used.
 2. **Slump:** ASTM C 143; one test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mix. Perform additional tests when concrete consistency appears to change.
 3. **Air Content:** ASTM C 231, pressure method, for normal-weight concrete; one test for each composite sample, but not less than one test for each day's pour of each concrete mix.
 4. **Concrete Temperature:** ASTM C 1064; one test hourly when air temperature is 40 deg F (4.4 deg C) and below and when 80 deg F (27 deg C) and above, and one test for each composite sample.
 5. **Compression Test Specimens:** ASTM C 31/C 31M; cast and laboratory cure one set of four standard cylinder specimens for each composite sample.
 6. **Compressive-Strength Tests:** ASTM C 39; test two laboratory-cured specimens at 7 days and two at 28 days.
 - a. Test two specimens at 7 days and two at 28 days.
 - b. A compressive-strength test shall be the average compressive strength from two specimens obtained from same composite sample and tested at age indicated.
- C. **Strength of concrete** will be satisfactory if every average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than 500 psi (3.4 MPa).
- D. **Test results** shall be reported in writing to Architect, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mix proportions and materials, compressive breaking strength, and type of break for both 7-and 28-day tests.
- E. **Nondestructive Testing:** Impact hammer, sonoscope, or other nondestructive device may be permitted by Architect but will not be used as sole basis for approval or rejection of concrete.

- F. **Additional Tests:** Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as directed by Architect. Testing and inspecting agency may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42 or by other methods as directed by Architect.

3.11 REPAIRS AND PROTECTION

- A. **Remove and replace concrete** pavement that is broken, damaged, or defective or that does not comply with requirements in this Section.
- B. **Drill test cores**, where directed by Architect, when necessary to determine magnitude of cracks or defective areas. Fill drilled core holes in satisfactory pavement areas with Portland cement concrete bonded to pavement with adhesive.
- C. **Protect concrete from damage.** Exclude pedestrian traffic from pavement for at least 3 days after placement. Exclude vehicular traffic from pavement for at least 14 days after placement. When construction traffic is permitted, maintain pavement as clean as possible by removing surface stains and spillage of materials as they occur.
- D. **Maintain concrete pavement** free of stains, discoloration, dirt, and other foreign material. Sweep concrete pavement not more than two days before date scheduled for Substantial Completion inspections.

3.12 CLEANUP

- A. **Remove all tools**, unused materials and debris from project, and leave area broom clean.
- B. **All excess concrete** shall be cleaned from gutters, abutting sidewalks, streets and silt fences and unusual care shall be taken to prevent diluted concrete from entering catch basins.
- C. **Repair or restore** to new condition lawn areas, trees, or shrubs adjacent to work site damaged by operations under this Contract.

END OF SECTION 32 13 13

Question 1

Supplementary Conditions, paragraph 4.7, beginning on page 4, indicates incidental planning and design is included in the prime contractor's coefficient. This paragraph further describes incidental planning and design to include development of sketches, specifications, engineering calculations, reports and studies. How will the AOC distinguish between incidental planning and design services included in the coefficient and AE services negotiated on a task order basis?

Response:

The planning and design to be included in the contractors coefficient will be sketches/ drawings, specifications and engineering calculations required to complete the work identified in the scope of work and to provide as built drawings at the completion of the task order. If full drawings, specifications, engineering calculations and reports identified in the AOC Design Standards are required, they will be negotiated as part of the task order.

Question 2

Section 015001, paragraphs 1.2.B and 3.4.B make reference to Division 31 and Division 32. Were specifications for Divisions 31 and 32 issued with the RFP or will they be provided in an amendment?

Response:

Division 31 specification and specifications from Division 32 are added to the solicitation by this amendment.

Question 3

Section 028233 paragraph 1.2.E on page 028233-4 requires the primary contractor to engage the services for a Project Certified Industrial Hygienist (CIH) for the period of the contract and states that the Project CIH is required to be on call and to be on project site within two hours after notification by the Government. Please confirm the requirement for this contract and, if required, clarify how you prefer these on-call services to be priced.

Response:

If the Project Certified Industrial Hygienist (CIH) is required then the task order will require these services.

Question 4

If the contractors are required to price the bond cost in their coefficient for the total original contract price and the government does not actually utilize the contract up to the maximum contract value, the government will be paying for unnecessary costs. Will the government consider having each task order

bonded independently upon issuance of the TO and including the bond cost as part of each task order? If one performance and payment bond is required at the commencement of the contract, what value should the bond be? A blanket \$5 million bond will only be needed if \$5 million in task orders are being performed concurrently.

Response:

A Bid Guarantee is required in the amount of not less than 20% of the maximum annual amount of \$5,000,000.00 with your proposal as required in the clause Offeror Guarantee added by this amendment to the solicitation conditions of RFP060094.

Question 5

Bid Security is required by the RFP to be equal to 20% of the proposed price of the contract. Typically on JOC contracts this means 20% of the guaranteed minimum. Please clarify that the bid security is \$10,000 (20% of \$50,000).

Response:

The Bid Guarantee is required in the amount of not less than 20% of the maximum annual amount of \$5,000,000.00 with your proposal as required in the clause Offeror Guarantee.

Question 6

Supplementary Conditions, page 6, Section 5, subsection 5.1 states that the contractor shall submit a proposal to the Contracting Officer within 10 Calendar days after receipt of the SOW. However, the contractor is required by the RFP to solicit a minimum of three independent, qualified bids from potential subcontractors prior to submitting the cost proposal for each task order. 10 days is not sufficient to competitively bid and obtain the best pricing for the government especially if the contractor is to seek small business participation. Will the government consider increasing the due date to 21 calendar days or as agreed upon for each task order?

Response:

The AOC shall require a 7 day turnaround on mission critical tasks, or urgent projects as defined by the AOC. The AOC shall require a 14 day turnaround time on normal routine tasks. This response will replace the time requirements in Supplementary Conditions reference above. The Government will not consider increasing the due date to 21 days, or agree to various undefined dates for proposal submission for task orders.

Question 7

Section 013101, paragraph 1.6 Administrative and Supervisory Personnel requires that a full time, on site superintendent be designated when an active

task order or combination of active task orders exceeds \$50,000 at a site. This requirement is difficult to price and account for in the coefficient since the contractor has no way of knowing how many task orders will require the dedication of superintendent. Will the government considers having this cost included as part of each task order when specifically required?

Response:

The contractor needs to use their judgement on determining the amount of task orders that will comprise the \$50,000 minimum requirement. The thresholds have been set for minimum and maximum task order dollar amounts and the contractors needs to bid based on these contract thresholds. The cost for any on site superintendent, or bonding costs should be included in the proposed coefficient.

Question 8

Electronic as built drawings is required by the RFP, will the AOC provide electronic drawings with each TO or will the contractor be required to generate new electronic drawings?

Response:

The AOC may provide electronic drawing with a task order, or the contractor may be required to generate new electronic drawings. Please note in the supplementary conditions 5.4 Pricing Documentation (a) Drawings shall use Micro Station, Version 7 or 8.

Question 9

Instructions for Preparing the Technical Proposal – Source Selection Procedures – Construction, “Solicitation Conditions” page 6: Does NOT indicate the government’s desire to receive an electronic copy of the proposal. Is this correct? And if the government requests an electronic copy of proposal – in what MS Word/Excel format/version?

Response:

Yes, an original and 4 paper copies are required as indicated in block 13 of the form for the Solicitation, Offer and Award, page 1 of 2. No electronic copy of the proposal is requested by the Government.

Question 10

Key personnel are required to meet experience qualifications included in the “special contract requirements,” referenced in the Solicitation Conditions section, subfactor (2)(ii) on pages 8 and 10. The RFP does not include a section titled “Special Contract Requirements” to examine the required personnel experience. Will such a section be amended into the RPF?

Response:

The reference to Special Contract Requirements is deleted from the solicitation.

Question 11

Evaluation Factor 4 – Please confirm that both Relevant Experience and Past Performance Questionnaire forms are filled out by the client not the contractor. It appears that the Relevant Experience is just general information relating to the contract.

Response:

The Past Performance Questionnaire should be filled out by the client(s) that the prime contractor has worked with. The Relevant Experience should be completed by the prime contractor to show experience that may, or may not cover the contractors that may complete the Past Performance Questionnaire.

Question 12

Does the Clause AOC52.233-2 Claims for Equitable Adjustments – Waiver and Release of Claims (Jun 2004) restrict the contractor to one claim on the entire contract over the base and four option years, or does this clause restrict the contractor to one claim for each task order?

Response:

The release of claims in the AOC Clause 52.233-2 Claims for Equitable Adjustments restricts the contractor after a release for an equitable adjustment for further claims arising out of delays or disruptions or both, caused by the aforesaid change on each action.

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

		1. CONTRACT ID CODE		PAGE OF PAGES 1 2	
2. AMENDMENT/MODIFICATION NO. 02		3. EFFECTIVE DATE September 5, 2006		4. REQUISITION/PURCHASE REQ. NO.	
		5. PROJECT NO. (If applicable)			
6. ISSUED BY ARCHITECT OF THE CAPITOL United States Capitol Washington, D.C. 20515			7. ADDRESS AMENDMENT/MODIFICATION TO Architect of the Capitol, Procurement Division Ford House Office Building, Attn: John Friedhoff Second and "D" Streets, S.W., Room H2-263 Washington, DC 20515		
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code)			(X)	9A. AMENDMENT OF SOLICITATION NO. RFP No. 060094	
				9B. DATED (See Item 11) August 3, 2006	
				10A. MODIFICATION OF CONTRACT/ORDER NO.	
CODE		FACILITY CODE		10B. DATED (See Item 13)	
SUBJECT: IDIQ For Repair, Renovation, Alteration to Facilities for AOC Job Order Contract					

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of offers is NOT extended. **THE DUE DATE FOR PROPOSALS IS September 28, 2006 AT 2:00 PM local time.**

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:

(a) By completing Items 8 and 15, and return 1 copies of the amendment*; (b) By acknowledging receipt of this amendment in Block 12 of Page 1 of the solicitation package, giving amendment number and its date; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. **FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER.** If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter make reference to the solicitation and this amendment, and is received prior to the opening/receipt hour and date specified. (*Note: Please only return 3 copies this amend. Pages 1-2 & NO ATTACHMENTS.)

12. ACCOUNTING AND APPROPRIATION DATA (If required)

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT/ORDER NO. IN ITEM 10A.			
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).			
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:			
D. OTHER (Specify type of modification and authority)			
E. IMPORTANT: Contractor _____ is not, _____ is required to sign this document and return it to the issuing office.			
14. DESCRIPTION OF AMENDMENT/MODIFICATION 1. SEE CONTINUATION PAGES. Except as provided herein, all terms and conditions of the document referenced in Item 9A, as heretofore changed, remains unchanged and in full force and effect.			
15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)	
15B. CONTRACTOR/OFFEROR _____ (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA By _____ (Signature of Contracting Officer)	16C. DATE SIGNED

AMENDMENT NO.: 02
Solicitation No. RFP060094

This amendment is issued as follows

Remove Page(s)	Insert Pages
Table of Contents, Amend 01 Page 2	Table of Contents, Amend 02, Page 2
Solicitation Conditions, Page 17	Solicitation Conditions, Amend. 02, Page 17
Supplementary Conditions, Page 6	Supplementary Conditions, Amend. 02, Page 6
None	Specification Division 31 & Division 32, Amend 02

1. Division 31, and Division 32 specifications are added to the solicitation. These specifications are referenced in the revised Table of Contents, Page 2 that is attached to this amendment.
2. The questions received in writing from contractors are responded to as shown in the second attachment to this amendment.
3. The Solicitation Conditions, page 17 AOC52.228-1 Offer Guarantee (JUNE 2004) is replace by the clause Bid Guarantee (AOC) insert pages 1, and 17 attached to this amendment. The Bid Guarantee is required on the 5 Million estimated yearly total.
4. The Supplementary Conditions, Page 6 is replaced by the attached Page 6 that allows more processing time of 7 days for mission critical task, or urgent projects as defined by the AOC, and a 14 day turnaround time on normal routine tasks.

The due date for proposal remains at September 28, 2006 at 2:00 PM local time. All other terms and conditions remain the same.

Attachments: Specifications Division 31, and Division 32
Table of Contents
Questions and Answers

Distribution:

Contract File
COTR -